

Abstract

The object of the invention is to provide a process for producing a coating for absorbing the neutrons which result from the nuclear reaction of radioactive materials. This process should be economic and easy to apply, the absorption effectiveness should be increased, a greater diversity of base materials and shielding element shapes should be made possible and, in particular, the process should allow lighter shielding elements with at least the same absorption qualities to be produced. According to the disclosed process for producing shielding elements for absorbing the neutrons which result from the nuclear reaction of the radioactive materials, a boron-nickel layer is applied in a boron-containing dispersion bath to at least part of a shielding element made of a base material, on at least one of its shielding surfaces. During the coating process, a relative movement between the surface to be coated and the dispersion bath is generated for at least part of the time.